The Kitchen and the Multinational Corporation: An Analysis of the Links between the Household and Global Corporations*

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ABSTRACT. The paper examines relationships between multinational corporations and the unwaged work women do in their homes. It is argued that far from being a sanctuary, the home has become a dumpsite for unnecessary and unsafe products. Women in North America and the Third World are now dealing with health and safety issues in their neighbourhoods and households. Consciousness of these dangers has resulted in mobilization and the formation of alliances aimed at confronting multinationals and securing more government regulation. The experience of one group of women in a small Ontario community is described.

Introduction

This paper will explore certain relatively unstudied aspects of the relationships between multinational corporations and the unwaged work that women do in their households. The activities of multinational corporations since the 1930s but especially in the last two decades have pushed them into far-flung areas of the world. This process of global penetration has seen pesticides, pharmaceuticals, chemical and nuclear wastes dumped in Africa, Asia and the Pacific (Melrose, 1982; Bull, 1982; Dinham and Hines, 1983). The Bhopal disaster is one horrifying example of the implications of this process but smaller-scale events occur on a daily basis. The Third World is not alone in being a dumpsite for global corporations. The household in North America is also intimately linked to this global process of commodification and danger. In large part it has been the unwaged workers within the household who have come face to face with the contradictory tasks of trying to do their jobs as housewives and mothers, while encountering life-threatening hazards.

The social relationships that women manage in the home, especially as caregivers, are not commodified, for the most part, even under the advanced capitalist conditions of North American society.[1] This separation from the commodity sphere has facilitated the mystification that the home is a haven from outside hazards and is protected from danger by the power of love, reciprocal human feelings, and kinship obligations. But the home is not really a private fortress: it is a sieve, open to all the excesses of industrial development. The household and its environment are a dumpsite for thousands of untested, or undertested chemical products[2] which endanger the health and safety of its members. And since the sexist gender division of labour in North America has designated women as primary caregivers it is women — wives and mothers — who are responsible for the health and safety of household members. Women confront the contradictions of trying to do their unwaged work of nurturing while being undermined by the dangerous products and practices of capitalist industrial production. The confrontations that these contradictions produce usually come as great surprises to women who may have heard of health and safety dangers in factories or offices but have felt secure and protected in their own homes. Nevertheless, it is in their homes that women begin to piece together the statistics on local miscarriage rates, on high incidences of birth defects

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and chronic illnesses in the neighbourhood. It is over cups of coffee in their kitchens that women have mobilized and found themselves taking on some of the most powerful forces in our society.

Part I of this article deals with the households' exposure to external dangers such as chemical waste dumps. Part II concerns exposure to less visible and less understood hazards stemming from the penetration of the home by the household products industry. In both cases the household will be analyzed in terms of its relationship to global corporations.

Part I

The household as a dumpsite: Prelude to consciousness and action

Across the United States and Canada, thousands of housewives and mothers have become political activists. They have left their homes to become collectors and analysts of health statistics, writers of briefs, organizers of press conferences, public speakers, agitators and demonstrators. In Hardeman County, Tennessee; Rutherford, New Jersey; Pine Ridge Reservation, South Dakota; Alsea, Oregon; Harlem, New York; rural Nova Scotia; Niagara Falls, New York; Scarborough, Ontario; and Whitchurch-Stouffville, Ontario,[3] women have found their households exposed to toxins and pollutants. Their houses have been found to be built on or near nuclear waste dumps (Scarborough, Ont; Pine Ridge Reservation) they have found deadly pesticides blowing into their windows (Alsea, Oregon; rural Nova Scotia) and chemical residues seeping into homes and schools (Love Canal, Niagara Falls, New York). They have found their air and their water contaminated by lead, PCBs and dioxin[4] (Rosenberg, 1984, Table 2). Women have miscarried at alarmingly high rates, have seen their children born with defects or die of leukemia at early ages.

The women who pieced together the evidence of these disasters and organized grass-roots movements have been for the most part unwaged, full-time housewives. (See for example Freudenberg and Zaltzberg's 1984 survery of 110 grass roots groups in the U.S. and Jackson and Weller, 1984, for a discussion of some Canadian housewife/activists.) Those housewives from white middle class backgrounds rarely had any previous political experience and began their inquiries assuming that government agencies were on their side – and would support them. (Black and native women began with no such trust for politicians and bureaucrats.) These women soon became disillusioned with local and national politicians who treated housewives dismissively and sided with the large corporations. Encountering male dominated 'realpolitik' was a bitter but also energizing experience for many of the women involved in neighbourhood coalitions. They frequently became tougher and more self-confident in their own organizational and political abilities. The political implications of this transformation from isolated housewife to activist has had an important personal impact on the lives of many of the participants and is also an important area for socialist/feminist analysis.

Let us consider in more detail the experiences of one such grass-roots alliance and trace out the course of events which brought housewives out of their kitchens and into major confrontations with big business and big government. My example is drawn from the Concerned Citizens of Whitchurch-Stouffville Inc.

Whitchurch-Stouffville is a small Ontario community just north of Toronto. Between 1962 and 1969 thousands of tons of toxic liquid industrial wastes were poured into a farmer's field never designed as a landfill (i.e. no liners were used) near the community.[5]

> One particular site was called a "garbageman's delight" because "you could pour stuff in one day and when you came back the next it was empty." (Cited in Jackson and Weller, 1982, 62)

For years, local women who constantly used the water in their domestic routines, asked the Ministry of the Environment about the impact of the dump on their water supply. Groundwater was only 100 feet below the dump and supplied residents' wells and the town of Whitchurch-Stouffville. In the spring of 1981, a group of Stouffville mothers conducted a health survey and found an unexpectedly high number of miscarriages. Like their concerned counterparts in Oregon, Nova Scotia, New Jersey and Niagara Falls, New York, they went to what they thought would be the appropriate

government agency with their health survey of the area. Except for one member of the group who had been vice-president of the Scarborough Progressive-Conservative association, they had had no previous political experience. "We were just your average Joe Citizen." Many have since come to the conclusion that ". . . government is nothing but bullshit and baffling brainlessness" (Interview, April 1984).

The group began as a Moms and Tots meeting in a United Church basement. Before they changed their name to the Concerned Citizens of Whitchurch-Stouffville they called themselves Concerned Mothers and conducted a health survey of a quarter of the homes in Stouffville. They found that the town's miscarriage rate was 26% compared to the provincial rate of 15%. Another survey within a two mile radius of the dump found 37 cases of cancer, 11 miscarriages, seven cases of birth defects and four cases of thyroid problems (Globe and Mail, May 12, 1982). Despite repeated statements by the Ministry of the Environment that the water was safe the group was far from reassured and decided to hire independent scientists to test the water. They raised money in the ways in which women raise money, through bake sales and entertainment shows, and spent between $10 000 and $15 000 on tests whose findings were at complete odds with the Ministry's.[6] Furthermore the Citizen's group protested that the government was trying to intimidate them with wiretaps and threats (Toronto Star, March 10, 1982) and a barrage of demeaning remarks about housewives. One member of the group dealt with the pressure by wearing a T-shirt to meetings which read: THIS IS NO ORDINARY HOUSEWIFE YOU ARE DEALING WITH. Other grass-roots groups in the U.S. and Canada experienced similar anti-housewife attacks. In Alsea, Oregon for example, women were organized in opposition to aerial spraying of forests with the herbicide 2, 4, 5-T manufactured by the Dow Chemical Company. Dow countered with accusations that the high miscarriage rates in the region were caused by alleged marijuana use among the mothers of Alsea (Freudenberg and Zaltzberg, 1984, 250).

In Whitchurch-Stouffville housewives have regarded themselves as fighting for life. "Our kids could get cancer . . . and that's a crime" (Interview, April 1984). Like their counterparts in other areas of Canada and the U.S. they soon realized that they had to form alliances with other groups (there are about 100 Environmental Non-Government Organizations in Ontario); they had to find out more about government,[6a] about power and about Waste Management Inc. (WMI), the multinational that they charged was polluting their neighbourhood.

Many people in Whitchurch-Stouffville no longer trust the Government of Ontario. They believe in ways that they never understood or believed before that the government is serving the interests of big corporations and finds the housewives to be a nuisance.[7] Said one member of the group protesting the dumpsite:

> Certain people had the rough luck to be situated near a landfill. Are they expendable because of that? (Fran Sainsbury cited in Jackson and Weller, 1981, 66)

The household and the multinational corporation

The question raised in Whitchurch-Stouffville is the crux of a global problem, in terms of health, responsibility and regulation. Capitalism has developed a new service — the disposal of dangerous industrial waste products. The corporations that deal in this service are enormously powerful in terms of size and profit margins. They view the world in terms of cheap and easily accessible dumpsites. They are "not in business for their health" as the saying goes; they are in business to make a profit. Here is a direct contradiction between the needs of capitalist accumulation and the needs of social reproduction: this contradiction pits the housewife and mother doing her unwaged job abainst global corporations.

It takes a great deal of digging to find out about such corporations. They purposefully keep very low profiles, and count on the fact that the average citizen is not an investigative reporter and will not be able to identify the dangerous cargo moving through their community in virtually unmarked trucks.

The company that the people of Whitchurch-Stouffville have been concerned about is call York-Sanitation and is a subsidiary of Waste Management Inc. (WMI). WMI of Oak Brook Illinois is currently the largest waste disposal company in the world. The company had a profit margin of 20.4% in 1980 representing $54.9 million (US) of revenue in excess

of expenditures (Moody's handbook of Common Stocks). WMI has contracts for waste disposal all over the world including Venezuela, Argentina and Saudi Arabia where they recently signed a $380 million (US) contract. In 1983 WMI purchased Chemical Nuclear Systems and is now involved in the disposal of nuclear wastes.

The corporation has been investigated and sued many times. For example, the state of Illinois has charged them with concealment of illegal toxic waste shipments and they are currently being prosecuted in Vickery, Ohio in a $400 000 suit which alleges that they violated environmental laws in relation to the disposal of PCBs and dioxin (Wall Street Journal, 29 March, 1983). In November (4th) 1984 both Business Week and Fortune reported that the U.S. Environmental Protection Agency had launched a $1.1 million suit against WMI for price fixing and illegal dumping. A year before (27 Dec. 1983) an Australian Court refused to allow a WMI contract with Queensland to stand and they were not permitted to operate in that state (Wall Street Journal, 27 Dec. 1983). WMI's incinerator ships have been investigated by the United States Environmental Protection Association and even WMI shareholders have brought a suit against their company which "alleges failure to disclose environmental liabilities" (Wall Street Journal, 29 March 1983).

Because WMI operates around the world it can offset the problems caused by lawsuits in one place by new deals in another and can count on the fact that there is very little communication between the people of the different areas where it operates. Furthermore WMI has the money and power to launch appeals when and where it wants to. And as in the case of Whitchurch-Stouffville it has continued to operate while appeals are pending. In fact in this Ontario community residents have been greeted with the following picture since 1977. As the Hughes Commission Report put it:

> There is no doubt in my mind (Hon. S.H.S. Hughes) that a great deal of justifiable public resentment was occasioned by the spectacle of the dump trucks rattling past the building where a hearing was convened to entertain an application for authority to do what their owners were doing without any authority whatsoever, and by open violation of orders made by a ministry of the government on the grounds that either an appeal was pending or the officers of the ministry were trying to coax a recalcitrant operator into a mood of compliance with what had been ordered.
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> (. . . Royal Commission . . . into WMI, 1978, 60–61)

The dumptrucks are continuing to operate in Whitchurch-Stouffville but the housewives have not given up. They are still concerned and still want the dumping to stop and they are willing to continue pushing public authorities to serve what they see as being the interests of the citizens rather than the multinational coporations. They still want regular health surveys of the region to test for changes in the levels of diseases and birth defects and they still want their water tested for mutagenicity and carcinogenicity. And they say, because they see the issue in terms of the health and lives of their children, that they have no intention of quitting their fight.

Politics

One of the most ingenious mystifications of capitalism has been to separate ideologically the economic from the political, making it appear as though power, the essence of politics, were somehow outside the realm of the process of capital accumulation (Wood, 1981). Companies as large as WMI, control enormous financial, legal and political resources. Compared to the millions that companies like this take in profits a year, the Concerned Mothers of a small Ontario community have very little in the way of resources. WMI, in an uncharacteristic breech of silence concerning their activities once accused the Whitchurch-Stouffville group of being "political elements" – clearly the most negative epithet they could come up with (Globe and Mail, 14 May 1982). And in essence the company was quite right, even though what they meant to imply was that the women of Whitchurch-Stouffville were using emotional pressure tactics to press their position with the Ministry. The 'politics' of this grass-roots organization go well beyond such petty accusations. Lois Gibbs, the mother/housewife, who was president of the Love Canal Homeowners Association, a group that argued that 56% of the children born near the

site were mentally or physically disabled has said, "'Birth defects have become a political issue'" (Cited in Norwood, 1985, 16).

Gibbs, who has now become a full-time activist, is involved with The Citizen's Clearing House for Hazardous Wastes (Arlington, Virginia) in the United States. This group has pressed for fuller studies of links between residential proximity to chemical dumpsites and birth defects. Thus far, U.S. Centers for Disease Control have been unwilling to undertake such surveys and have attributed higher rates of teratagenicity to improved reporting techniques by doctors. Gibbs' interpretation is different. She has argued that public health officials are deliberately refusing to continue monitoring hot spots, because epidemiological surveys may in fact confirm that industrial wastes are heavily implicated in causing birth defects (Norwood, 1985, 16).

If such correlations were confirmed the findings would be explosive. They would raise questions about the sanctity of the home — a discourse thus far staked out by political conservatives. The conservative symbolic geography of private home and safe family life separated from public and workplace activities is based on the image of home as reward for hard work and law-abiding (i.e. non- militant) habits. (See Wynn, 1985 for a brief history of separate spheres ideology.) Whitchurch-Stouffville, Love Canal and other activist groups have challenged that ideology and have shown that the home is not necessarily a sanctuary or a reward. They have argued that industry and government have lined up to attack the home, not defend it.

Part II

This section discusses factors that contributed to the social isolation of the housewife in the home and facilitated the household's colonization by home products manufacturers. I will analyze how the home came to be a dumpsite in which women/consumers have been actively and successfully encouraged to purchase large quantities of potentially hazardous substances in the belief that they are fulfilling supposedly innate feminine caregiving functions. The marketing of these products has involved the development of costly advertising campaigns but has also produced extremely high profits for multinational corporations who are among the largest and most powerful companies in the world.

The mortgage holding husband consumerist wife ideal: "because cleaning is caring."

The home products industry began actively expanding in the 1920s and 1930s. Its development was interwined with political and ideological trends which devalued collectivist movements in relation to domestic labour. In post World War I North America, anything other than the isolated housewife managing her domestic world alone, came to be identified as politically subversive. The imagery and symbols of these decades continue to have profound effects on how domestic labour is organized and carried out today, and influence what has and what has not been problematized in relation to domestic labour in both personal and theoretical terms.

Extremely significant for Canadian and American domestic life has been the defeat of the collectivist branch of the home economics movement, which since the late 19th century had developed models of co-operative solutions to the problems of housework, food distribution (consumer's co-operatives) and preparation (co-operative dining clubs and cooked food delivery services) and childcare (day-care). By the 1920s individualist trends among home economists were in the ascendancy presenting models of the home as a private, feminized and isolated domestic sphere. The model of the private home paid for by the male breadwinner in long term installments and the female unwaged caregiver who maintained the home and raised children by herself became the dominant model, in North America, in conscious opposition to collectivist models which were being developed in Russia after the 1917 Revolution.

The concept of the mortgage-holding male appealed to industrialists who saw it is a way of taming an increasingly radicalized and militant labour force. In 1919 when over 4 000 000 workers were involved in demonstrations in the U.S. (and major strikes in Canada as well as mass rallies of unemployed veterans), industrialists became intrigued by the idea that labour peace could be

bought by making small surburban homes available to white male workers. Representatives of the housing industry phrased it this way:

> Happy workers invariably mean bigger profits, while unhappy workers are never a good investment . . . A wide diffusion of home ownership has long been recognized as fostering a stable and conservative habit . . . The man owns his own home but in a sense his home owns him, checking his impulses. (Industrial Housing Associaties, 1919, *Good Homes Make Contented Workers* cited in Hayden 1982, 283–4)

By 1931, this approach had been institutionalized in U.S. public policy. That year President Hoover convened the "Conference on Home Building and Home Owning" which put government support behind a national strategy of home ownership for men "'of sound character and industrious habits'" (Cited in Hayden, 1982, 286). The coalition of those who favoured this policy included former campaigners against slums and even some feminists. But for the most part backing came from real estate speculators, housing developers and the manufacturers of consumer goods.

The involvement of this latter group is significant because the move to cheap urban housing which aimed at tying men to long-term mortages also aimed at tying women to consumerism or 'consumptionism' as one of its leading advocates (Christine Frederick) in the 1920s and 30s called it (Hayden, 1982. See also Ewen, 1976). The gendered social division of labour was to work as follows. Men were to be breadwinners and homeowners able to liberate their wives and children from the evils and hazards of the workplace. The *dependent-wife family* (Cameron, 1983) meant not only the demobilization of women from the workforce and the closure of wartime daycare centres but the possibility that working class women could devote themselves full-time to domestic tasks. Higher steady wages for husbands were still too small to pay for servants to help with the childcare and the housework but North American industry in combination with the teaching of home economics in schools and community centres (see for example, Parkers, 1899, 'Training for Housework in Canada') would create a class of "scientific household engineers" who did not need servants or collective social supports (Hayden, 1982, 386). Each woman was to become the epitome of Taylorist efficiency, alone, in her own home. (See for example Frederick's *Household Engineering: Scientific Management in the Home*, 1920.)

It has been pointed our that Taylorist techniques of efficiency were logically impossible in the home since scientific management required scale, specialization and the division of labour while the essence of privatized housework is precisely its isolated unspecialized character (Hayden, 1982; Wynn 1985). Efficiency was a smokescreen, according to Hayden, for the real aim of the home economics movement as developed by Frederick and her colleagues which was to turn the household into a unit of consumption. Frederick and others worked as consultants to large corporations and advertising agencies becoming specialists on how to sell things to women, and developing advertising techniques aimed at women's supposed suggestibility, passivity and inferiority complexes. (See *Selling Mrs. Consumer* 1928, dedicated to Herbert Hoover and for a later era see Janet Wolff, 1958, *What makes Women Buy*.)

The world, in which men earned and women bought, did not become a widespread reality until the post-Second World War boom of cheap suburban housing supported by government policy in both the U.S. and Canada in the 1950s. The image of women's domesticated role which preceded that boom had decades to spread and fix itself in popular consciousness. Since the 1920s advertising and the household products industry had worked hard to stereotype housework as an extension of the feminine role, an expression of love of family and not socially useful work that could potentially be organized in a variety of different ways. Housework became conceptualized as a personal task made easier by the purchase of an ever-increasing array of products which women bought because they wished to care for their families in the best, most modern way possible.

An ironic boon to advertisers was the fact that despite it all women did not seem always to love isolated housework and often yearned to find ways to involve others, even though this upset the social conventions of a male-female division of labour. Colgate- Palmolive, for example, hit upon the sales advantages of this discontent years ago with its ads for a home cleaner that was symbolized by a white knight.[8] A Colgate vice-president explained the significance of the ad this way:

> We believe that every woman has a white knight in her heart of hearts. To her he symbolizes a good powerful force that can enter her life and clean up that other man in her life, her husband, who symbolizes exactly the opposite of what the white knight stands for (*Printer's Ink*, 1966, 85).

In the isolation of their housework, while serving their families women have been encouraged by advertisers to fantasize about other men but in ways that are not a threat to marital stability. The somewhat ambiguous figure of Mr. Clean has been consciously portrayed by advertisers as being a eunuch, and, therefore not a problem in terms of female alliances or male egos (*Ibid.*).

While variations on this theme of fantasy domesticity have continued to appear, one theme is never raised: women are discouraged from asking any questions about the safety of the products they buy. They are to concentrate on "ring around the collar," extra moist cake mixes and shiny floors that never yellow. They are never to ask questions about the chemicals used to attain these dazzling effects. They are never to ask questions about the unsafe and toxic qualities of what they bring into their homes because otherwise the whole myth of the home as separate sanctuary and reward might crumble.

Let the buyer beware

The development of the mortgage-holding consumerist household ideal has permitted manufacturers to dump an enormous variety of virtually untested chemicals into the home and to shift the responsibility for product safety onto the consumer rather than the producer. There are literally thousands of products that one could discuss. In the area of food, for example, housewives and health activists have been concerned with the issue of food additives – everything from salt, sugar, perservatives, artificial colours and flavours to lead leeching out of the solder of evaporated milk cans to hormones and antibiotics in meat.[9] These are not simple issues of the kind with which public health officials deal. These are issues which lead to the heart of major world corporations such as plantations, agribusinesses and food processing companies, and also have to do with the most fundamental organizational structures of production, advertising, distribution, and health. The presence of sugar, salt, caffeine, BHA, BHT, and pesticide residuals in food has raised key questions about social, economic and political organization as well as health concerns.

Other areas of concern are the dumping of pesticides, asbestos, lead, PCBs, formaldehyde, aerosols, vinyl chloride and appliances which pose carbon monoxide and radiation hazards in the home. (See Rosenberg, 1984 for a discussion of these hazards.) Also of concern are the products we use to clean our homes – the soaps, detergents, softeners, and polishes. This latter category will be discussed in some detail because these products are usually viewed as benign and the hazards they pose are generally unknown as are the connections between these products and multinational corporations.

I have argued that, for the last 50 years, the notion of the isolated housewife fulfilling her feminized caregiving destiny has been developed, used and refined to facilitate the dumping of mountains of unsafe products in the home. What is known about these product is that they are supposed to make women feel satisfied in the thought that they are creating comfortable happy homes.[10] (Of course we also know that a large percentage of women hate doing housework. See, for example Oakley, 1975; Luxton, 1980; Proulx, 1978.)

I have written about the health and safety problems that detergents, polishes and cleaners pose in the home elsewhere (Rosenberg, 1984). Here is a table which summarizes my findings. What is not known and as far as I can tell not being studied is what the impact of long term exposure to these products might mean. If two ounces of dishwashing detergent can be lethal to a small child, what is the health outcome of 30 years of exposure to detergent residue? If one or two drops of furniture polish can be fatal if ingested, if aspiration can cause a form of chemical pneumonia, if some products are routinely contaminated by cancer-causing nitrosamines; then what are the long term effects of spraying and inhaling while cleaning the dining room table? If a fifth of an ounce of disinfectant can kill a small child, which is more dangerous in the long run: the microbe or the disinfectant? And finally what are the combined effects of these cleaners, sprays, and pesticides?

The success of advertising in directing women

TABLE I
Dangers of Home-cleaning products

Product	Dangers	Alternatives
Drain cleaner(lye)	The most dangerous product in home use. Can eat through mouth, skin, stomach, or damage eyes. There is no effective antidote.	Rubber plunger or plumber's snake. Prevent clogging with drain strainer. Use hot water + ¼ cup washing soda.
Toilet bowl cleaner (ammonia)	Can burn skin on contact, or respiratory tract if inhaled. Liquid from intank cleaner harmful if swallowed. Fumes fatal if mixed with chlorine bleach.	Scrub with stiff brush.
Scouring powder	Rapidly absorbed through mucous membranes and scraped skin. Can cause red rash in any area that comes in contact with product.	Salt or baking soda clean and disinfect effectively.
Oven cleaner(lye)	Extremely dangerous. Can burn skin and eyes. Inhaling fumes is hazardous. Some brands don't have childproof closures.	Damp cloth and baking soda. Scrape hardened material with a knife. One commercial product contains no lye.
Chlorine bleach	Can cause corrosive burns if swallowed. Fumes fatal if mixed with ammonia.	Safer when diluted.
Window or glass cleaner	Swallowing can cause nausea or vomiting. Can irritate eyes. Lethal dose for a child is over one pint.	Warm tap water alone or ½ cup white vinegar mixed with 1 quart cool water. For chrome, use flour and a dry cloth.
Disinfectants	May irritate skin and eyes. Spray can irritate throat. May cause nausea and diarrhea if swallowed. Lethal dose for small child is 1/5 oz.	Soap and water.
All-purpose cleaner	Hazardous to eyes. Can burn throat and stomach lining if swallowed. Products containing petroleum distillates can cause a fatal lung condition.	Diluted bleach or detergent. A slice of potato removes fingerprints on painted wood.
Dishwashing detergent	A lethal dose for a small child is 2 oz. Enzymes can be highly irritating.	Use less. Rinse dishes immediate after use. Scour with a stiff brush and/or salt and baking soda. Soak burned pots overnight, boil, cool, and scour.
Automatic dishwashing detergent	Major cause of poisoning in children. Irritating to skin, eyes, respiratory tract. Residue on dishes may have long-term effects.	Use less. Vinegar in rinse cuts spotting, leaves less residue to be ingested.

Table I (*Continued*)

Laundry detergent	A lethal dose for a small child is 1/7 oz. Swallowing can cause nausea, vomiting, diarrhea. A few grains can damage eye cornea if left untended.	Soap powders are safer. Liquid laundry detergents do not contain sodium carbonate, a corrosive present in detergent powders.
Furniture polish	A drop or two of solvent fatal if swallowed. Flammable. Aspiration can cause a form of chemical pneumonia. Nitrosamines (present in some brands) can be absorbed through skin and cause cancer in laboratory animals.	Tsp. of vinegar in a cup water; buff with a dry cloth for wood furniture. Use material oil for shine.

Sources:

On drain cleaners, see Calpirg Reports (June 1981). 'Factsheet'. Center for Science in the Public Interest, *The Household Pollutants Guide* (Garden City, N.Y.: Anchor Books, 1978), pp. 180–90. Joanne Robertson, 'Housework is Hazardous to Your Health', Pollution Probe (Toronto), 1982, Women's Occupational Health Resource Center. 'Factsheet for Women Who Work in the Home', January 1979. 'Alkali Products Dangerous to Eyes', Occupational Health Bulletin 26, nos. 1–2 (1971): 4.

On toilet bowl cleaners, see Robertson *op. cit., Housework is Hazardous to Your health, op. cit.*, Center for Science in the Public Interest. *Household Pollutants Guide, op. cit.* 'Toilet Bowl Cleaners', *Consumer Reports* (4, 3), March 1975: 157.

On scouring powder, see Robertson, *op. cit.*

On oven cleaners, see Robertson, *op. cit.*, 'Oven Cleaners', *Consumer Reports* (45, 10), October 1980: 598–99.

On chlorine bleach, see Calpirg Reports, *op. cit.*, Robertson, *op. cit.*

On window and glass cleaners, see Calpirg Reports, *op. cit.*, Robertson, *op. cit.*

On disinfectants, see Robertson, *op. cit.* 'Household Cleaners', *Consumer Reports* (39, 9), September 1974: 677.

On all-purpose cleaners, see Calpirg Reports, *op. cit.*, Robertson, *op. cit.*; 'All-purpose Cleaners', *Consumer Reports* (44, 2), February 1979: 81.

On diswashing detergent, see Calpirg Reports, *op. cit.* Robertson, *op. cit.*

On automatic dishwashing detergent, see Robertson, *op. cit.*

On laundry detergent, see Calpirg Reports, *op. cit*: Center for Science in the Public Interest, *op. cit.*, pp. 149–50: Emmanuel Sommers, 'Risk Assessment for Environmental Health'. *Canadian Journal of Public Health* (7), November–December 1979: 389.

On furniture polish, see Calpirg Reports, *op. cit.*: Robertson, *op. cit.*, 'Furniture Polishes', *Consumer Reports* (44, 7), July 1979: 496.

away from health and safety questions is in large part attributable to the enormous size of the advertising budgets available to these corporations.

Soap business: harvesting profits in households

Proctor and Gamble (as of 1978) is the biggest advertiser in the United States, spending $554 million (US) a year. This is more money than such major corporations as General Motors, AT&T or Gulf and Western spend in a year on advertising (Moskowitz *et al.* 1980, 359). Proctor and Gamble harvests enormous profits in the kitchens of the world. As of 1980, its sales were estimated at $9.3 billion (US), with profits at $557 million (US) (*Ibid.*, 499). In the United States Proctor and Gamble is the largest manufacturer of bar soap, cake mixes, laundry detergent, toilet tissue, toothpaste, diapers and deodorants and the third largest producer of mouthwash, salad and cooking oils, and coffee (*Ibid.*, 355). Its products are sold under a variety of different names suggesting to consumers that they are actually choosing from a variety of different products. However, only the names are different the products are essentially the same.[11]

Most of the home cleaning and bar soap market is controlled by only three corporations: Proctor and Gamble, Colgate-Palmolive and Unilever. These three corporations accommodate each other and do not compete; the fiction of competition is maintained within the differently named soaps and detergents produced by each conglomerate. The real aim of advertising is not to promote Tide over Cheer but to constantly assert the need for these products.

Enormous profits have been made, but only by those companies that were big enough to market and promote them. Thus when chemists at Monsanto (the fifth largest chemical company in the US) invented a lowsudsing detergent in 1957, they found that even they were too small to capitalize the marketing programme necessary to sell the detergent. "Monsanto people blanched" at the price and sold the product to Lever Bros (Moskowitz *et al.*, 1980, 611). Monsanto bowed out of sales and promotion and focussed its attention or making most of the chemicals which are used by the major manufacturers of soaps and detergents.[12]

In the past the advertising industry has expressed concern about the fact that there was very little difference between the products on the market. *Printer's Ink*, a leading journal of the United States advertising industry noted in 1966:

> Is such advertising an economic waste — a drain on society? The differences in scents and the amount of chemical brighteners among brands are not regarded by many economists as justification for spending millions on advertising [just] to establish brand preferences.
>
> (*Printer's Ink*, 1966, 85)

The article went on to predict that the advertising structure as it then existed would inevitably collapse. Instead it has expanded. This is not only due to the expansion of selling techniques and the development of new "needs" and new products in North America but to the expansion of activities in the Third World.

In sales to the Third World it is the Unilever corporation which dominates,[13] through its subsidiaries Hindustan Lever and United Africa Company (Pedlar, 1974). On a world scale the Unilever Corporation is the ninth largest corporation on the globe, just after the major oil corporations. Women were from the beginning (1885) targeted by this international empire. Unilever (formerly Lever Brothers) was among the pioneers of market research. Between 1885 and 1905 Lever Brothers spent the sum of £2 million in advertising — an unheard of amount in those days, in campaigns directed against working class housewives.[14] Lever exhorted his managers to try to achieve "hypnotic effects" with their advertising, and to "build a halo around the product" (cited in Counter Information Services, n.d., 92). By 1899 soap advertising was directed at children ". . . so they will bother their mothers to buy some" (*Ibid.*, 23).

Unilever, with over 800 subsidiaries, has rarely identified itself as the parent company. Unlike the Nestlé Corporation for example, it has striven for a policy of anonymity so that workers and consumers in different areas rarely know with whom they are dealing. The company's activities range from owning plantations that supply palm oil, cocoa, tea and coffee to companies trading in agricultural commodities, shipping lines, warehouses; they own factories processing primary products into margarine, cooking oils and of course detergent, soaps and other cleaning products. They own supermaket chains and marketing organizations which distribute their products. Their subsidiaries handle every imaginable level of production, distribution and marketing from growing timber to designing wallpaper. They have a network of laboratories producing pesticides and conducting genetic engineering projects (*Ibid.*, 8). Unilever is the largest food company in the world. It has over 1000 products on the market; none of which bears the name Unilever.[15]

This company which touches the daily lives of millions amassed sales to third parties (i.e. excluding intracompany trading) in 1979 of £9842 million — "an amount roughly equivalent to the GNP of Angola, Benin, Botswana, Burundi, the Central African Empire, Chad, Congo, Gabon, Gambia, Guinea, Guinea-Bissau, Lesotho, Malawi, Mali, Mauritania, Mauritius, Mozambique, Niger, Rwanda, Senegal, Sierra Leone, Somalia, Swaziland, Togo, and Upper Volta" (Dinham and Hines, 1983, 167).

Politics

What have been the responses to such power? In

North America we often see the small scale skirmishes between mother/housewives and these major corporations acted out in women's pages of our local newspapers. Women write in to complain about faulty pouring spouts on bleach containers, or lung irritations caused by cleaning the oven, or baby bottle nipples contaminated by cancer-causing nitrosamines[16] (Fishbein, 126—127). The "consumer experts" hired by local papers treat each issue as an isolated problem. Consumer objections of this sort are easily absorbed into the mythology that corporations will always try to make their products better and safer if concerns are pointed out to them.

More subversive to the ideology of consumerism are public education activities carried out by ecology groups who are not dependent on advertising dollars for their existence. In this context just naming names and pointing out some of the dangers of these products can be very effective. It has been because of alliances between consumer groups, legal groups and ecology groups that such dangerous products as Captan, a fungicide have come under government scrutiny and may eventually be banned.[17]

Other effective alliances have come from the international sphere where organizations like the International Organization of Consumers' Unions operate. In 1981 for example the IOCU with head offices in Brussels and Penang, launched Consumer Interpol.[18] There are about 52 groups working in 32 countries which are actively participating in this network. They are also in close contact with other highly successful coalitions like the International Babyfood Network, and Health Action International, which coordinated an informal grapevine of about 200 groups working on pharmaceutical issues and which is in contact with Pesticides Action Network, itself representing about 50 working groups. It is clear to Third World health activists that the multinationals are using their countries as dumpsites for hazardous wastes, for untested or banned pharmaceuticals, for toxic pesticides and for dangerous consumer products. In the summer of 1985, North American non-government organization (NGO's) delegates met with their Third World counterparts in the context of the Nairobi Conference to share information and discuss strategies in dealing with global corporations.[19] These coalitions are concrete examples of how groups have developed ways to expand and attack the practice of the multinationals of turning the home into a dumpsite.

Conclusion

Health issues and consumer issues have come to be defined as women's issues, because women act as our principle caregivers and are seen as being responsible for the reproduction of non-commodified reciprocal relationships in the home. Mothers, and wives are under social obligations to keep the family safe and nurture human feelings of intimacy, sharing and security. But this caregiving work is not done in a vacuum: world economic systems are dominated by capital accumulation and the spread of commodified relationships.

This process has been resisted in a variety of ways, as people have confronted not only exploitation in the workplace but also threats to themselves and their families at home. Love, attachment and security are still highly valued and these values in relation to the home have been politicized. The New Conservatives have characterized the discourse in terms of a defence of home and family as a private feminized sanctuary apart from the public masculinized domain. Separation of spheres and of gender roles are crucial to this conception. The New Right has attributed problems within the family to feminists defined by them as women who want abortions, sex-education, day care and non-gendered division of labour in the home and in the workplace (Freudenberg and Zaltzberg, 1984; Harding, 1978).

But the activities of the people and groups discussed in this paper have the potential for shifting the locus of the discourse to an examination of capitalism and the responsibilities of democratic governments. Environmentalist, consumer and health groups, dealing with essentially the same issues as the New Right in terms of concern with life, health, and caregiving have identified different enemies and are forging a different political discourse. They have found the home to be a contrived and inauthentic refuge and attribute this finding not to feminism but to corporate greed, and inadequate govenment regulation.

Such groups are amorphous; they do not form a

coherent social movement. Often group structure is decentralized. Such groups, by their very existence provide lived alternatives to the alienating and oppressive conditions around them. Because they are usually composed of society's less powerful people, they are rarely taken seriously by those with power. Such grass-roots groups are like social guerrillas who deal in localized hit and run operations not full-fledged battles. But herein may lie their advantage. They are harder for power structures to define, locate, co-opt or eradicate. They may be suppressed in one place but reform and reappear in another. They have the weapons of ridicule and embarrassment using the sacredness of motherhood ideology to confound their enemies. In the past (see for example, Kaplan, 1982) as well as in the present women transcending their domestic roles, formed coalitions and formulated radical social visions which have brought women into large scale collective action against economic and political power holders. Whether these actions are mobilized by the right or the left is historically contingent but the capacity of housewives to draw on social networks and personal resources holds out the promise of new patterns of empowerment and new alliances for social change.

Notes

* Paper presented at *Women and the Invisible Economy* Conference, Institute Simone de Beauvoir, Concordia University, Montreal, Quebec, Feb. 22, 1985.

[1] There are certain highly significant exceptions. Much that now relates to birth control, the management of dying and death is commodified, for example, in the marketing of contraceptives by multinational pharmaceutical companies or the franchizing of profit-making nursing homes. Also significant is the relatively new phenomenon of surrogate motherhood, although certain kinds of adoption, especially from native reserves and overseas, has been and continues to be a means by which relatively wealthy white middle class people purchase children from the poor. While the sale of sex in the form of prostitution is ancient, the recent expansion of pornography has made it a major growth industry.

[2] In the wake of the Bhopal disaster the New York Times published an article on potential chemical hazards. Citing a survey by the U.S. National Academy of Science, March 1984, the Times listed the following estimates about the quality of information available on the potential health hazards of selected chemicals, expressed as a percentage of the chemicals in each groups.

Group	Quality of Information			No of Chemicals Studied
	A	B	C	
Pesticide Ingredients	10%	52%	38%	3,350
Pharmaceuticals	18%	42%	56%	3,410
Food Additives	5%	49%	46%	8,627
Other Commercial Chemicals (with sales of at least one million pounds a year)	11%	11%	78%	12,880

A = Adequate Information
B = Incomplete Information
C = No Information

Source: New York Times, Dec. 16, 1984; National Academy of Sciences 1984. Toxicity Testing: Strategy to Determine Needs and Priorities, Washington: National Academy Press.

[3] Hardeman County, Tennessee was the site of chemical dumping by Velsicol Chemical Company. Local wells were contaminated with twelve chemicals including 5 known carcinogens — benzene, chlordane, heptachlor, endrin, dioxin. Eighty residents have launched a $2.5 billion class action suit against the company (Freudenberg and Zaltzberg, 1984, 246–7).

Rutherford, New Jersey is a cancer hot spot. In this comfortable middle class suburb, the leukemia rate for children ages five to nineteen was six times higher than the U.S. national average. Causes for high cancer rates in this community include: 42 industrial concerns using organic chemicals including known carcinogens within three miles of the local school; intensive mosquito spraying yearly, including the use of DDT until 1967; exposure to high levels of automobile exhaust; exposure to microwave radiation from two airports and an industrial research facility. Parent activists in this community have forced a plant using benzene to shut down and with the support of labour and environmentalist groups have forced the state of New Jersey to establish a cancer registry to aid in epidemiological research (Freudenberg and Zaltzberg, 1984, 247–249).

Pine Ridge Reservation, South Dakota has been the site of high rates of miscarriage (38% in 1979 compared to generally acceptable rates of 10% to 20%). A local hospital has also

reported extremely high rates of birth defects. Other studies have shown that the Reservation had higher than average rates of bone and gynecological cancers. Widespread spraying of pesticides and herbicides and exposure to uranium tailings and nuclear waste have been implicated in these health disorders. WARN (Women of All Red Nations) has been active in trying to improve health conditions on this reservation (Freudenberg and Zaltzberg, 1984, 249–250).

Alsea, Oregon is a rural logging community where high levels of herbicidal spraying have been linked to an elevated miscarriage and birth defects rate. Women in that community have taken on the Dow Chemical Corporation, manufacturers of the defoliant 2, 4, 5-T, the United States Forest Service and the United States Environmental Protection Agency to have spraying banned (Freudenberg and Zaltzberg, 1984, 251–252). A comparable event has occurred in rural Cape Breton, Nova Scotia where local residents have recently fought and lost a court case to prevent the spraying of a 2, 4, 5-T and 2, 4-D mixture. This mixture was known as Agent Orange when it was used by the United States army as a defoliant during the Viet Nam war. It has been sprayed in Nova Scotia by Nova Scotia Forest Industries, a Swedish multinational to destroy competing hardwoods in areas reforested with the softwood cash crop, Herbicide efficacy has never been demonstrated. Critics contend that its use and putative value are aimed primarily at justifying unecological forest harvesting practices. Dioxin, a bi-product of this herbicide, is a carcinogen (Labonté, 1984, 4–9).

Recently Dow Chemical, involved in a major class action suit brought by veterans of the Viet Nam war who were exposed to Agent Orange, settled out of court. Dow agreed to pay the veterans and/or their survivors $180 million. The plight of women nurses exposed to Agent Orange during the Viet Nam war is discussed in *Family Circle* magazine (Distelheim, 1985).

In addition, the U.S. government has purchased the entire town of Times Beach, Missouri for $30 million. The town had been exposed to dioxin-laden oil which was sprayed on its streets to keep dust levels down (Labonté, 1984, 4). Niagara Falls, New York, site of Love Canal, Bloody Run Creek and other chemical dumps has been identified as releasing toxins into Lake Ontario. Dioxin may be among them. Citizens Rebelling Against Wastes in Ontario, Inc. and Operation Clean Niagara have been active on the Canadian side of the Niagara River (Jackson and Weller, 1984, 30).

The Love Canal Home Owners Association was influential in forcing the United States government to evacuate 239 families closest to a chemical dumpsite in 1980. Research at the Rosewell Park Memorial Institute in Buffalo, New York, indicated higher than accepted rates of miscarriage and birth defects including mental retardation (Orwen, 1985, Toronto Star, 26 January). Some Love Canal area residents who relocated three kilometers away now find themselves exposed to toxins from the Cecos dumpsite (Orwen, 1985, Toronto Star, 2 February).

In Harlem, New York City, mothers concerned over high levels of asbestos fibres in their children's school forced the city to spend $100 000 on repairs. A survey by the New York City Board of Education in 1977 showed that 400 New York Schools had asbestos problems (Freudenberg and Zaltzbeg, 1984, 252–253). Asbestos is a potent carcinogen found in insulation products, dry-wall patching compounds, ceiling tiles as well as some baby powders, some hair driers, oven mits and ironing board covers (Rosenberg, 1984, Table 2). The hazards of asbestos are well-documented. As early as 1913 both United States and Canadian insurance companies refused to sell life policies to asbestos workers (Epstein, 1978, 83–4). Johns-Manville is a leading manufacturer of asbestos products. Workers in its Scarborough plant have sustained high rates of disabling chronic respiratory diseases including lung cancer (*Ibid.*, 85). This multinational has recently been accused of dumping 300,000 tons of crushed asbestos in Scarborough near highland Creek, a small stream flowing into Lake Ontario (Toronto Clarion, 1984, Vol. VIII, No. 4).

[4] Concern over PCB exposure has mobilized citizens in the west-end of Toronto (who live near a CGE plant). Recently, high levels of PCBs have been identified in Pottersburg Creek in London, Ontario. Joseph Cummins, a geneticist at the University of Western Ontario, has called Pottersburg Creek one of Canada's largest environment disasters. "It's unprecedented to have PCBs loaded with dioxins running through residential neighbourhoods," according to Cummins (Kenna, 1985, Toronto Star, 2 February).

[5] In Dec. 1979 the Globe and Mail reported that the government had found 800 previously unrecorded dumpsites in southern Ontario (Globe and Mail, Dec. 11, 1979). The research team making that survey also estimated that there may be between 2000 and 3000 unrecorded dumps in Ontario as a whole. In 1979 the U.S. Environmental Protection Agency estimated that there were 50 000 chemical dumps in the U.S. Between 1200 and 2000 are thought to pose significant dangers (Hart 1979, 25). In the U.S., it has been argued that 125 billion pounds of hazardous wastes were produced in 1980 – enough to fill 2 000 Love Canals (Brownstein, 1981). In Canada, the federal government has estimated that as of 1982, there are 3.2 million tonnes of toxic wastes generated in this country (Environment Canada, 1982, vol. 3, 8). About half of these wastes come from Ontario which produces 1 650 107 tonnes annually (Waste Management Corporation, 1982, 58).

[6] The Minister of the Environment (Ontario) Keith Norton stated in 1981 that on the basis of "the most comprehensive testing of any water supply in the history of this province using some of the most sophisticated methods available to

us" that there was "outstanding water quality in the community" of Whitchurch-Stouffville (Legislature of Ontario, Legislative Debates, 11 June 1981, p. 1486 and 16 June 1981 p. 1650).

[6a] One thing they discovered was that York Sanitation a subsidiary of Waste Management Inc. of Oakbrook, Ill. had made a $35 000 contribution to the Progressive-Conservative party of Ontario in 1977 which was laundered through Chicago, Luxembourg and Italy. The Royal Commission which investigated this unseemly donation in 1978 admitted that it contravened the Election Finance Act of 1975 but laid no criminal charges (Ontario, Report of the Royal Commission Appointed to Inquire Into Waste Management, Inc. etc. The Hon. S. H. Hughes, March 30, 1978).

[7] Not all members of the community supported the efforts of the Concerned Citizens groups. According to Fran Sutton, some Stouffville residents thought of the women as "'mouthy dames,' and wished '. . . they would go . . . look after their pots and pans and children and keep out of this. They are just hysterical women'" (Jackson and Weller, 1984, 30).

[8] Advertisement (television) for Pinesol cleaner, March 1985.

[9] See for example, Hall, 1974, on the issues of additives overprocessing and the destruction of nutrition, carcinogens (DES) and antibiotics in meat; *Consumer Reports* on lead in evaporated milk, lowering sugar and salt content of baby foods etc. The Nestle boycott has generated important literature on multinational corporations, food and health. See also Weir and Schapiro, *Circle of Poison*, on the return of banned pesticides in food imported into North America from the Third World.

[10] What is also mystified about these products is the conditions under which they are made and distributed both in terms of the working conditions inside the factories which produce them and in terms of the health and safety concerns within those factories. We don't normally pick up a box of detergent and ask what the hourly wage of the worker who made it was. In fact we have little knowledge of the production process involved in making laundry detergent. The whole process is socially and culturally camoflagued. Our schools do not tour detergent plants, or the chemical companies that make the dyes, emulsifiers and solvents that go into the detergent. There are no TV documentaries about the men or women in these plants. Are they unionized, do they have adequate health and safety equipment? These are questions totally absent from public discourse and in fact very hard for the specialist to investigate. The barriers preventing problematization and investigation are socially constructed. Once questions are asked about the working conditions of lettuce pickers, for example, alarming truths about exploitation, child labour or the unsafe use of pesticides may emerge. Thus manufacturers must make a concerted effort to prevent consumers from asking: "Who made this? How did it get to my kitchen?"

One strategy of deflection has been to present the labour process as a fairy tale. Advertisements tell the public that products are made by elves, "Crans," giants or benign patriarchs like "Mr. Kraft," "Mr. Christie," and "Aunt Beatrice." Fantasy labour complements fantasy housework symbolized by blonde middle class mothers dancing or singing in glowingly well appointed homes as camera angles pan to describe the intense satisfaction they feel in cleaning, ". . . because cleaning is caring . . .".

[11] Among dish detergents P&G produces Ivory Liquid, Joy and Dawn. In laundry detergents P&G makes Bold, Cheer, Dash, Duz, Era, Gain Oxydol, Tide, Dreft and Ivory Snow. In bar soap Ivory, Camay, Coast, Lava and Safeguard are all made by P&G. And in general cleaners and softeners, P&G makes Mr. Clean, Spic and Span, Top Job. P&G toothpastes are Crest and Gleem; deodorants are Secret and Sure; diapers are Pampers and Luvs.

[12] Monsanto is also a major producer of pesticides for agribusinesses and in this regard has become involved in advertising. As the pesticide industry came under increasing attack by environmentalists and health activists. Monsanto has launched a $45 million (US) campaign to assure consumers that chemicals are 'natural' and that its herbicides, like Vegadex discussed in TV commercials, are beneficial. In independent studies, Vegadex has been shown to be carcinogenic to rats and mice, including breast cancers in the females of both species, tumors of the stomach in male rats and of the lung in male mice. It is considered to be unsafe for agricultural workers (Epstein, 1978, 394).

[13] In the United States, Proctor and Gamble, Colgate-Palmolive and Unilever control 90% of the market, Unilever has only 18% of detergent sales, Proctor and Gamble has 50% and Colgate-Palmolive has 22% (*Counter Information Services*, n.d., 12—13).

[14] Global market penetration seems boundless. In the summer of 1983, while I was doing research in a remote corner of the Kalahari desert in Botswana, I found Bingo detergent available on the virtually barren shelves of a small store.

[15] In some African countries a large percentage of the waged workforce is in some way dependent on Unilever (*Ibid.*, 7. See also R. Howard, 1978).

[16] Former Consumer Affairs Minister Judy Erola set a limit for nitrosamines of 30 parts per billion in baby bottle nipples to be lowered to 10 p.pb. in Jan. 1985 (Toronto Star, 16 February 1984).

[17] Captan, a fungicide, is hazardous to pregnant women and young children. It has been found to cause cancer and birth defects in pregnant animals. It is used by home gardeners as well as commercial florists and gardeners and unbeknownst

to most people, it is also found in cosmetics, wallpaper paste, vinyl textiles, and polyethylene garbage bags (Rosenberg, 1984).

Captan has been tested and approved by Industrial Bio-Test Laboratories in the United States and their findings on this and over 100 other chemicals were used by Canadian regulators to grant registration for the use of these chemicals in this country. Unfortunately IBT officials have been tried and found guilty of having falsified tests on more than 100 chemicals allowed for use in Canada by the Departments of Agriculture and Health and Welfare (Hall, 1981; Vigod and Woodsworth, 1982; Schneider, 1983). The Canadian government knew of this problem in 1977 but did not release details to the public until 1980 (Toronto Health Advocacy Unit, City Hall, 1981). Pressure by ecology groups after the IBT affair finally forced the Ontario Ministry of the Environment to act on Captan.

[18] When a Consumer Interpol member learns of a potential hazard in his or her country, the member will investigate and if convinced that something is amiss, will notify the Consumer Interpol coordinator in Penang, sending along whatever evidence has been gathered. The coordinator drawing on the advice of experts on such issues as food, drugs, pesticides, consumer law will sift the evidence. If the suspected hazard is confirmed, the coordinator sends out Alert notices to all groups in the network. The message that goes out directs activists to contact manufacturers or distributers immediately, to contact the relevant government agencies and agitate loudly in the press (*New Internationalist*, 1983; 28–29).

[19] Personal communication from a delegate from the Manitoba Council for International Co-operation on joint efforts between MCIC, IOCU, and HAI.

[20] For a fuller discussion of recent patterns of organization in the United States see Freudenberg, 1984.

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Review

Langdon Winner (1986) *The Whale and the Reactor.* Chicago: University of Chicago Press.

It was the Paris Exhibition of 1900 that gave Henry Adams his metaphor for the age of industrial technology: the dynamo. Langdon Winner's epiphany occurred in a similarly electrifying situation. While touring the Diablo Canyon nuclear power plant, located on the wild and beautiful middle California coast, he saw a grey whale surface, spout, and disappear. This sharp juxtaposition of images – the whale and the reactor – not only symbolized for Winner the California of his boyhood and what it was becoming, but also provided the title for his recent excellent book.

The Whale and the Reactor contains a collection of Winner's writings over the past several years, a period during which he has developed and deepened his ideas first presented in *Autonomous Technology*. Winner always writes beautifully, but here I believe his ideas are more accessible than before. Careful reading of his earlier work should make it clear that Winner is no technological determinist. Still, it has been my experience that students are often mystified by the concept of autonomous technology. In contrast, the issues raised in Winner's 1980 *Daedalus* article 'Do Artifacts Have Politics?' (revised as Chapter Two of *The Whale and the Reactor*) have provided my students with surprising new insights and have never failed to provoke lively discussion.

From and uncritical assumption of the neutral instrumentality of technology to the awareness that technologies have political properties it is but a small additional step to grasp how technologies may, in fact, usurp conventional forms of political decision making. Technologies themselves comprise "forms of life." As a technological critic Winner enables us to take this step, to see that "the construction of a technical system that involves human beings as operating parts brings a reconstruction of social roles and relationships. . . . Hence, the very act of using the kinds of machines, techniques, and systems available to us generates patterns of activities and expectations that soon become second nature." (p. 11)

Whatever becomes "second nature" tends to function, in Michael Polanyi's apt phrase as a "tacit dimension" of practice. Consequently, we act automatically without giving adequate reflec-

(*continued on p. 212*)